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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/760,931	01/16/2001	Bi Le-Khac	01-2532B	4319

24114 7590 06/27/2003
LYONDELL CHEMICAL COMPANY
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EXAMINER

ZALUKAEVA, TATYANA

ART UNIT	PAPER NUMBER
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1713

DATE MAILED: 06/27/2003

13

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-B

Office Action Summary	Application No. 09/760,931	Applicant(s) BI LE-KHAC ET AL	
	Examiner Tatyana Zalukaeva	Art Unit 1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 April 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7 and 9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7, 9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

DETAILED ACTION

1. Claims 10, 12 and 13 have been cancelled in Paper No.12.
2. Claims 1-5,7 and 9 are pending.
3. Before discussing the rejection of claims, Examiner would like to address the issue how the claims were interpreted: The instant claim 1 calls for three steps: a) providing acrylic monomer(s) and a macromonomer, chain transfer agent, which may be or may not be combined with monomers, and separately providing free radical in appropriate form, and optionally separately provided the chain transfer agent; b) polymerizing the above components named as streams at a temperature between - 20 to + 150C; c) removing a polymer from reactor. It is noted that "the reactor" of step © has not been named in steps (a) and (b), therefore the reactor is any vessel where polymerization takes place.
4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
5. Claims 1-5, 7, 9, are rejected under 35 U.S.C. 102(b) as being anticipated by Nagasawa et al (U.S. 5,310,813).
Nagasawa discloses a continuous process that comprises polymerizing macromonomer having a radical polymerizable group, such as macromonomers listed in col.4, lines 40-50, wherein polyethylene glycol methacrylate is expressly named

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(col.4, line48, 49) with another radical polymerizable monomer in an organic solvent (abstract, col. 6, lines 55-60). The polymerization temperature is 60-100°C (col. 6, lines64, 65). Acrylic monomer that can be copolymerized with macromonomer is taught in col. 6, lines 4-13, among them acrylic and methacrylic acids are named in line 8.

Polymerization initiator is azo type radical initiator, described in col. 6, lines 66-68, or the like, organic peroxide or the like (col. 7, lines 1-4).

Organic solvents of Nagasawa are listed in col. 6, lines 60-65.

Polymerization in solvent proceeds in the presence of chain transfer agent in order to effectively control the molecular weight of branched polymer, mercaptan derivatives as chain transfer agents are taught in col. 7, lines 5-11.

Therefore, all the limitations of the instant claims 1-5, 7 and 9 are expressly met by Nagasawa.

Response to Arguments

6. Applicant's arguments filed April 10, 2003 have been fully considered but they are not persuasive. Applicants arguments reside in contention that Nagasawa does not anticipate the continuous process because the "word" continuous appears only once in Referential Example 1 col. 7, line 50. Applicants further argue that this process is not continuous because Nagasawa does not teach the continuous withdrawal of a product from reactor. Applicants further recite the instant claim 1, as allegedly claiming in step © "continuously withdrawing a polymer stream".

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In response to Applicants' arguments Examiner would like to address those issues separately:

- a) Nowhere in the claims Applicants recite "***continuous***" withdrawal of a polymer.
- b) If the criteria of Applicants' "continuous" process is a continuous withdrawal of a polymer, then Applicants **claimed** process is also semi-batch identical to that of Nagasawa, as alleged by Applicants.
- c) Even though the recitation of "continuous" process appears only once in Nagasawa's referential example, the process of this Example is utilized in all working Examples of Nagasawa, as cited in col.8, lines 18, 33, 59; col. 9, lines 13, 37). Even if *arguendo*, only once is continuous process is mention it is already enough for anticipating the claimed embodiment.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tatyana Zalukaeva whose telephone number is (703) 308-8819. The examiner can normally be reached on 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (703) 308-2450. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

**Tatyana Zalukaeva, Ph.D.
Primary Examiner
Art Unit 1713**



June 24, 2003